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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,321	07/12/2001	Kotaro Takagi	450100-03337	1814

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EXAMINER
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WILLIAMS, LAWRENCE B

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/904,321	<b>Applicant(s)</b> TAKAGI, KOTARO	
	<b>Examiner</b> Lawrence B Williams	<b>Art Unit</b> 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Lines 9-10 on page 3 cite "BPF (band-pass filter) 218". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. Figures 1 - 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

3. The abstract of the disclosure is objected to because the abstract exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

4. The abstract of the disclosure is objected to because Examiner suggests applicant rewrite abstract to be better descriptive of the invention. Correction is required. See MPEP § 608.01(b).

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150** words. It is important that the abstract not **exceed 150 words** in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The disclosure is objected to because of the following informalities: Applicant has failed to include both figures 7A and 7B as required in "Brief Description of the Drawings".

Appropriate correction is required.

7. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

9. Claims 1 –11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of the claim 1 cites “transmission and reception of a multiband used”. It is unclear as to what applicant is referencing sing multiband as used is an adjective.

10. Claims 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of the claim 13 cites “and reception of a multiband used”. It is unclear as to what applicant is referencing sing multiband as used is an adjective.

11. Claims 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of the claim 14 cites “transmission and reception of a multiband used”. It is unclear as to what applicant is referencing sing multiband as used is an adjective.

***Allowable Subject Matter***

12. Claims 1-14 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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13. The following is a statement of reasons for the indication of allowable subject matter:

The instant application discloses a multi-band transmission and reception signal generating method and apparatus. An exhaustive and thorough search of prior art records has failed to disclose a multi-band transmission and reception signal generating apparatus comprising “transmission-oscillation-signal-generating means for generating transmission oscillation signal of said first communication system and a transmission oscillation signal of said second communication system by comparison of an input reference frequency with the frequency of a reference oscillation signal generated by said transmission & reception-reference-oscillation-signal-generating means, said input reference frequency being a properly set value of the frequency of a signal generated by said constant-frequency-signal-generating means, wherein in the case of said second communication system, said transmission & reception-reference-oscillation-signal-generating means generates a reception local oscillation signal for demodulating a signal to be transmitted by said second communication system; and said transmission-oscillation-signal-generating means generates a transmission oscillation signal of said second communication system based on said reception reference oscillation signal generated by said transmission & reception-reference-oscillation-signal-generating means” along with the remaining limitations of claims 1 and 14. Nor does the prior art teach a multi-band transmission and reception signal generating method comprising “transmission & reception-reference-oscillation-signal-generating step of generating a reception-reference-oscillation signal for generating a reception oscillation signal for demodulation of signal received by said first communication system in said first communication system and demodulation a signal received by said second communication system in said second communication system, and a

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transmission-reference-oscillation signal for generating a transmission oscillation signal for transmission of a signal by communication system said first communication system in said first and transmission of a signal by said second communication system” along with the remaining limitations of claim 12.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Boos discloses in US 2002/0039889 A1 a Transceiver.

b.) Leizerovich et al discloses in US Patent 6,728,525 B1 a multimode Transceiver with Multiple IF's and Common Injection.

c.) Takagi discloses in US 2002/0049075 A1 a Multiband Portable Radio Terminal.

d.) Adams et al. discloses in US Patent 6,765,977 B1 an Offset Mode Phase Locked Loop Frequency Synthesizer with Reduced Divide Ratio.

e.) Gustafsson et al. discloses in US Patent 6,385,262 B1 a Method and Apparatus for Changing the Channel Bandwidth That is Receivable in a Radio Receiver.

f.) Ohta et al. discloses in 6,104,764 a Radio Receiver Apparatus For Receiving communication Signals of Different Bandwidths.

g.) Snider discloses in US Patent 6,804,261 B2 a Multi-Band Receiver Having Multi-Slot Capability.

h.) Snider discloses in US Patent 6,487,219 B1 a Multi-Band Receiver Having Multi-Slot Capability.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw  
October 28, 2004

  
AMANDA T. LE  
PRIMARY EXAMINER